LISTING OF THE CLAIMS

1-3. (Canceled)

4. (Currently amended) ~~A manufacturing method of the master disc for the optical disc according to claim 1~~ A manufacturing method of a master disc for an optical disc, comprising:

a film forming step of forming an inorganic resist layer made of an incomplete oxide of a transition metal as a film onto a substrate; and

a step of forming resist patterns including concave/convex shapes by exposing and developing said inorganic resist layer,

wherein in said film forming step, oxygen concentration of said inorganic resist layer is made different in its thickness direction,

wherein said oxygen concentration is increased toward the surface of said substrate from the surface of said inorganic resist layer,

wherein a single element or alloy of the transition metal, or an oxide of them is used as a target material, said inorganic resist layer is formed as a film onto the substrate by a sputtering method using oxygen or nitrogen as a reactive gas, and the oxygen concentration of said inorganic resist layer is made different in the thickness direction by changing at least either a film forming power or a reactive gas ratio.

5-10. (Canceled)

11. (New) A manufacturing method of a master disc for an optical disc, the method comprising:

sputtering a target material onto a substrate, said target material on substrate forming an inorganic resist layer;

changing oxygen concentration of said inorganic resist layer in a thickness direction,

wherein adjustment of a process parameter during the sputtering step changes said oxygen concentration.

12. (New) A manufacturing method according to claim 11, further comprising:

removing portions of said inorganic resist layer to form concave/convex shapes.

13. (New) A manufacturing method according to claim 12, further comprising:

depositing a film onto said concave/convex shapes;

removing said film from said concave/convex shapes, said film after removal having said concave/convex shapes thereon.

14. (New) A manufacturing method according to claim 13, wherein said film is a metal nickel film.

15. (New) A manufacturing method according to claim 12, wherein the removing step includes changing an exposing power to said inorganic resist layer, said concave/convex shapes of different depths being formed by changing said exposing power.

16. (New) A manufacturing method according to claim 11, wherein said one of tungsten, molybdenum, tungsten molybdenum, and their oxide is used as said target material.

17. (New) A manufacturing method according to claim 11, wherein a transition metal is used as said target material.

18. (New) A manufacturing method according to claim 17, wherein said inorganic resist layer is an incomplete oxide of said transition metal.

19. (New) A manufacturing method according to claim 17, wherein said target material is an alloy of said transition metal.

20. (New) A manufacturing method according to claim 17, wherein said target material is an oxide of said transition metal.

21. (New) A manufacturing method according to claim 17, wherein said target material is an oxide of an alloy of said transition metal.

22. (New) A manufacturing method according to claim 11, wherein said adjustment decreases said oxygen concentration from the surface of said inorganic resist layer toward the surface of said substrate.

23. (New) A manufacturing method according to claim 11, wherein said adjustment increases said oxygen concentration from the surface of said inorganic resist layer toward the surface of said substrate.

24. (New) A manufacturing method according to claim 11, wherein etching sensitivity of said inorganic resist layer changes in accordance with an oxygen concentration in said inorganic resist layer.

25. (New) A manufacturing method according to claim 11, wherein said process parameter is a reactive gas ratio, said reactive gas ratio being expressed by the following formula:

(a reactive gas) / (a discharge gas + said reactive gas).

26. (New) A manufacturing method according to claim 25, wherein prior to the sputtering step, said reactive and discharge gases are introduced into a film forming chamber.

27. (New) A manufacturing method according to claim 26, wherein said reactive gas is oxygen.

28. (New) A manufacturing method according to claim 26, wherein said reactive gas is nitrogen.

29. (New) A manufacturing method according to claim 28, wherein said nitrogen is used as said reactive gas when said target material includes an oxide.

30. (New) A manufacturing method according to claim 11, wherein said process parameter is a film forming power.

31. (New) A manufacturing method according to claim 11, wherein said inorganic resist layer includes a second layer between a first layer and a third layer.

32. (New) A manufacturing method according to claim 31, wherein said first layer has a first oxygen concentration, said second layer has a second oxygen concentration differing from said first oxygen concentration, and said third layer has a third oxygen concentration differing from said first and second oxygen concentrations.

33. (New) A master disc for an optical disc, the master disc comprising:

an inorganic resist layer made of an incomplete oxide of a transition metal, said inorganic resist layer including a second layer between a first layer and a third layer,

wherein said first layer has a first oxygen concentration, said second layer has a second oxygen concentration differing from said first oxygen concentration, and said third layer has a third oxygen concentration differing from said first and second oxygen concentrations.

34. (New) A master disc for the optical disc according to claim 33, wherein said first oxygen concentration is greater than said second oxygen concentration, said second oxygen concentration being greater than said third oxygen concentration.

35. (New) A master disc for the optical disc according to claim 34, wherein a concave portion terminating at a substrate extends through said third, second, and first layers.

36. (New) A master disc for the optical disc according to claim 33, wherein said first oxygen concentration is less than said second oxygen concentration, said second oxygen concentration being less than said third oxygen concentration.

37. (New) A master disc for the optical disc according to claim 36, wherein a concave portion terminating at a substrate extends through said third, second, and first layers.

38. (New) A master disc for the optical disc according to claim 37, wherein another concave portion terminating at said first layer extends through said third and second layers.